

PENNSYLVANIA DEPARTMENT OF AGRICULTURE
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ANGOUMOIS GRAIN MOTH CONTROL

loss to wheat growers of Pennsylvania due to the attack of the Angoumois grain moth is estimated to be at least a million dollars. This loss could, in a very large measure, be prevented if the following preventive and remedial measures were followed:

I. CLEAN UP THE BARN BEFORE MAY 1ST.

Much of the waste wheat left over winter in the barn and in the bin is infested by the moth, and is one means of carrying the insect over the winter. The barn and the bin should be swept so as to clean up all the old grain, and in this way the number of moths issuing in the spring to infest the growing wheat in the field at the time when the wheat is in the "milk," will be greatly reduced.

II. THRESH WHEAT EARLY

Early threshing of the grain is one of the very best ways of preventing moth infestation. In stored unthreshed grain, the insect passes through many generations, each generation increasing in number of individuals and in damage to the wheat. When threshing is delayed until late in the fall or early winter, often the wheat has been rendered worthless and unsatisfactory for milling by the moth. (See Circular No. 1 of the Bureau of Plant Industry).

III. FUMIGATE AT ONCE

Unless the wheat is to be sold at once and not kept in storage, it should by all means be fumigated immediately after threshing. The best material for this purpose is carbon bisulfide, which can be purchased at drug stores, or from other dealers in chemicals. The wheat should be placed in a tight bin, and fumigated within a few hours, using carbon bisulfide at the rate of 3 pounds (or 3 pints) to each 100 bushels of grain, or 1 pound to every 40 cubic feet of wheat. THE BIN MUST BE TIGHT. If the bin in the barn or storehouse is not well built and reasonably tight, it will be cheaper in the long run to rebuild the bin, rather than to attempt to fix it up. A tight bin is one in which all cracks, knot holes, or other openings have been filled up or closed in some way or other, so as to make the sides and floor of the bin practically air tight. If a new bin is to be built, use tongue and grooved boards of well seasoned lumber, preferably with two thicknesses. When ready to fumigate place the carbon bisulfide in shallow pans, using one pan to approximately every 25 square feet of grain surface. The top of the bin should be covered over so as to keep the fumes from escaping. Fumigation will not be effective if it is done when the air temperature is below 65 degrees Fahr. at the time of fumigation.

The fumigation should be repeated ten days later to insure a complete killing of the insect (the egg may not be killed by the first fumigation). CARBON BISULFIDE IS EXPLOSIVE, and the greatest care should be used to prevent an explosion by keeping fire of any kind whatsoever away from the bin at the time of fumigation, and for at least 24 hours afterwards. Twenty-four hours after fumigation open up the granary to air it. Keep all livestock from under bins during fumigation.

IV. THE COMMERCIAL GRAIN DRIER

When wheat is sold direct from the threshing machine, and not intended to be stored in bins and fumigated, it should be run over the commercial grain drier, to prevent injury from moth. Fumigation is a preventive rather than a cure, and heavily infested wheat before being milled should be run through the drier and blower, to remove inflated and hollow grains, chaff and debris; fumigation with carbon bisulfide would render such wheat unfit for milling. For information regarding commercial grain driers, address the Bureau of Markets of the Pennsylvania Department of Agriculture, Harrisburg, Pa.

